

TO GMO OR NOT TO GMO

What's a GMO?

GMOs are genetically modified organisms that can contribute to food sustainability by influencing the development of animals to live longer, be more resistant to disease, and indicate certain genetic pathways.

GMO's can be used as a tool to help eliminate world hunger and nutritional deficiencies.

PROS

- Can reduce the cost of food^[2]
- Make animals disease resistant and plants heartier^[1]
- Create nutrient rich variants of foods (folate-rich food reduces birth defects)^[3]

CONS

- Depletion of soil nutrients
- GMOs will outcompete standard organisms^[1]
- Very few studies on early developmental effects

Take-aways?

GMOs, although controversial, can be used to increase food sustainability, especially in developing countries. More research needs to be conducted in order to demonstrate how it can improve the food security of large groups of people.

Genetic pathways and gene expression can give helpful hints about how GMOs impact the development of animals.

Citations:

Burns, Katie. "Genetically Engineered Animals in the Food Supply." *Avma.org*, 2008, www.avma.org/News/JAVMANews/Pages/081101a.aspx.^[1]

Giuliano, G. (2017). Provitamin A biofortification of crop plants: a gold rush with many miners. *Current Opinion in Biotechnology*, 44, 169-180. doi:10.1016/j.copbio.2017.02.001^[2]

Cornell Alliance for Science. (2018, June 20). Unfairly demonized GMO crops can help fight malnutrition. Retrieved from <https://allianceforscience.cornell.edu/blog/2018/06/unfairly-demonized-gmo-crops-can-help-fight-malnutrition/>^[3]